

VISWABHARATHI WISEWOODS

PRACTICE SHEET – 1

GRADE : IX – X (Medical Foundation for Saadhana's)

SUBJECT : BOTANY

I. Answer the following questions :

1. Name the kind of plastid found in the mesophyll cells of the leaf?
2. Write the difference between Chlorophyll and Chloroplast?
3. What is Photo oxidation of Chlorophyll?
4. What is Kranz anatomy?
5. Why do you think Rubisco Carries more Carboxylation in C_4 plants?
6. Write the first stable product in C_4 and C_2 pathway?
7. What is Primary acceptor molecule of CO_2 in C_4 plants?
8. Why is it not possible to demonstrate respiration in green plants kept in Sunlight?
9. Most leaves have the upper surface more green and shiny than the lower one. Why?
10. State the law of limiting factors?

II. Fill in the blanks :

11. Stroma is ground substance in _____.
12. In the flowering plants food is transported in the form of _____.
13. The optimum temp for the activity of photosynthesis _____.
14. C_3 plants shows increased rates of photosynthesis at _____ concentration of CO_2 .
15. The mineral involved in the photolysis of water are _____.

III. Multiple Choice Questions :

16. The rate of photosynthesis is not affected by []
A) Light intensity B) humidity C) temp D) CO_2 conc.
17. The first reaction in Photo respiration. []
A) Carboxylation B) Oxygenation C) Decarboxylation D) None of these
18. How much % of Carbon is conserved through C_2 pathway. []
A) 25% B) 50% C) 75% D) 100%
19. Photorespiration is favoured by []
A) High temperature and low O_2 B) High O_2 and low CO_2
C) High CO_2 and low O_2 D) High humidity and temperature
20. The law of limiting factor relating to photosynthesis was given by []
A) Engleman B) Krebs C) Blackman D) Liebig

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PRACTICE SHEET – 2

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I. Answer the following questions :

1. Define Respiratory substrate?
2. Why ATP is called Energy currency of cell?
3. Define Glycolysis?
4. What are the sites of cellular respiration?
5. How do plants breathe?
6. How roots Respire?
7. How woody stems Respire?
8. Give examples for Anaerobic Respiration?
9. Write the functions of Stomata?
10. Write the end products of Aerobic Respiration?
11. Why Glucose is most favoured Respiratory substrate?
12. Name the reducing equivalents formed in Glycolysis and Krebs cycle?
13. Why exchange of gases is not so difficult in plants?
14. What is the product of Glycolysis?
15. How many ATP are produced in Glycolysis?

II. Answer the following :

16. Common step of both aerobic and anaerobic respiration is _____.
17. Where does electron transport occur in cell? []
A) Cytoplasm B) Mitochondria matrix C) Inner MM D) Outer MM
18. First reaction of glycolysis is catalysed by []
A) Hexokinase B) Aldolase C) Isomerase D) Mutase
19. Products of alcoholic fermentation. []
A) Lactic acid & Ethylalcohol B) Ethylalcohol & Butyric acid
C) Ethylalcohol & CO₂ D) None of these
20. At the end of Glycolysis, six carbon compound ultimately changes in to _____.

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PRACTICE SHEET – 3

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I. Answer the following questions :

1. What do you mean by oxidative phosphorylation?
2. How many turns of Krebs cycle required for complete oxidation of 2 molecules of glucose?
3. Which biomolecule is common for respiration mediated breakdown of Fats, Carbohydrates, and Proteins?
4. What is the significance of step wise release of energy in respiration?
5. What is the R.Q value for fats?
6. ATP is _____.
7. The enzymes involved in the chemical reactions of Glycolysis are located in _____.
8. End products of Krebs cycle from one molecule of glucose is _____.
9. Pyruvate undergoes decarboxylation an enzyme complex called as _____.
10. Stable product formed in Krebs cycle is _____.
11. Site of respiration in Bacteria. []
A) Episome B) Mesosome C) Ribosome D) Microsome
12. In the anaerobic conversion of 1 molecule of glucose to 2 molecules of lactate by fermentation the net gain of []
A) 1 ATP B) 1 NADH C) 2 ATP D) 4 ATP
13. The enzymes of TCA cycle are present in []
A) Cytosol B) Golgi complex C) Mitochondria D) ER
14. The ultimate e^- acceptor of respiration in an aerobic organisms is : []
A) Cytochrome B) O_2 C) H_2 D) Glucose
15. Phosphorylation of glucose during glycolysis is catalysed by []
A) Phospho glucomutase B) Hexokinase
C) Phosphorylase D) None of these
16. ETS is located in Mitochondrial []
A) Outer membrane B) Inner membrane space
C) Inner membrane D) Matrix
17. Which of the following exhibits highest rate of respiration? []
A) Growing shoot B) Germinating seed C) Root tip D) Leaf bud
18. Chemiosmosis theory of ATP synthesis in the mitochondria is based on []
A) Proton gradient B) Accumulation of K ions
C) Accumulation of Na ions D) Membrane potential
19. Cytochromes are found in []
A) Cristae of mitochondria B) Lysosomes
C) Matrix of mitochondria D) Outer wall of mitochondria
20. Oxidation of one molecule of NADH and one molecule of $FADH_2$ produces _____ and _____ ATP.